

Appn. No. 09/939,267

Attorney Docket No. 10541-466

I. Amendments to the Claims

28. (Previously Presented) A system for a backlit display, comprising:
a plurality of light emitting diodes connected together in series;
a plurality of parallel elements connected in parallel with the plurality of light emitting diodes, and wherein the plurality of light emitting diodes are adapted to provide back lighting for a liquid crystal display;
a current monitor connected with the plurality of light emitting diodes that measures an amount of current flowing from the plurality of light emitting diodes and generates a current flow signal;
a temperature sensor in communication with the plurality of light emitting diodes to measure a temperature of the light emitting diodes and generate a temperature signal corresponding to the temperature;
a voltage converter that supplies a current to the plurality of light emitting diodes as a function of the current flow signal, a commanded current signal, and the temperature signal, when in a first mode below a threshold temperature the voltage converter being in electrical communication with the plurality of parallel elements to automatically increase a voltage across a parallel element of the plurality of parallel elements based on the current flow signal, thereby causing the current to flow through the parallel element and around a light emitting diode of the plurality of light emitting diodes upon an open circuit failure of the light emitting diode and maintain a consistent brightness, and when in a second mode above a threshold temperature the voltage converter being configured to reduce the current to the plurality of light emitting diodes as a function of the temperature signal.

29. (Previously Presented) The device of claim 28, further comprising a temperature derating circuit that reduces the current to the plurality of light emitting diodes the temperature signal exceeds the temperature threshold.



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30. (Previously Presented) The device of claim 29, wherein a first feedback loop is formed by providing the temperature signal to the temperature derating circuit.

31. (Previously Presented) The device of claim 29, further comprising a luminance display processor configured to adjust the commanded current signal based on the temperature signal to provide the consistent brightness from the plurality of light emitting diodes.

32. (Previously Presented) The device of claim 31, wherein the luminance display processor adjusts the commanded current signal to as a function of a measured temperature and a temperature correction factor table.

33. (Previously Presented) The device of claim 31, wherein a first feedback loop is formed by providing the temperature signal to the temperature derating circuit.

34. (Previously Presented) The device of claim 33, wherein the second feedback loop is formed by adjusting the commanded current signal in the luminance display processor based on the temperature signal.

35. (Previously Presented) The device of claim 34, wherein the commanded current signal is provided to the temperature derating circuit from luminance display processor.

36. (Previously Presented) The system of claim 28, wherein the commanded current signal comprises a direct current signal.

37. (Previously Presented) The device of claim 28, wherein the commanded current signal comprises a pulse width modulated signal.



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38. (Previously Presented) The device of claim 28, wherein the plurality of parallel elements comprises a plurality of zener diodes.

39. (Previously Presented) The device of claim 28, wherein a parallel element is connected in parallel with a light emitting diode of the plurality of light emitting diodes.

40. (Previously Presented) The device of claim 28, wherein a parallel element is connected in parallel with multiple light emitting diodes of the plurality of light emitting diodes.

41. (Previously Presented) The device of claim 28, wherein the temperature sensor measures a solder temperature near a light emitting diode.

42. (Previously Presented) The device of claim 28, wherein the temperature sensor comprises a temperature dependant resistor.

43. (Previously Presented) The device of claim 42, wherein a terminal of the temperature dependant resistor and a cathode terminal of a light emitting diode of the plurality of light emitting diodes are thermally interconnected.



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